

## SECTION 15.40: HEARING CONSERVATION

Last Updated: 11/03

A hearing conservation program must be put into effect for all employees exposed to noise levels of 85 dbA (decibels, A-scale) or more for an eight hour Time-Weighted-Average (TWA). The TWA is that sound level which represents an average exposure for an 8-hour period. The following elements are required of the program:

- Monitoring of high noise level environments to determine whether a hearing conservation program is required.
- Initiate engineering or administrative controls when possible to reduce noise exposures.
- Employee notification of exposure to excessive noise levels and results of audiometric testing.
- Obtaining baseline audiograms for all affected employees (those exposed to 85 dbA TWA or greater).
- Annual training for affected employees as to effects of noise on hearing, audiometric testing, purpose and use of protectors, and access to information as defined in the OSHA standard (29 CFR, 1910.95).

An industrial hygiene survey may be needed to determine if noise level exposures warrant a conservation program. Sound level meters can provide a general idea of exposure in many cases, and can determine whether a program will be needed. For a general idea of typical noise levels, the following provides the number of decibels associated with various activities. OSHA threshold levels imply 8-hour exposure periods.

Decibels	Activity
0	theoretical threshold of human hearing
15	average threshold of human hearing
18	rustle of leaves
25	whisper at 5 feet
50	average office environment
60	normal conversation
75	average factory
85	<b>OSHA threshold for hearing conservation program</b>
87	heavy street traffic
90	<b>OSHA threshold for mandatory protection</b>
103	punch press
115	<b>OSHA maximum noise level allowed</b>
120	auto horn
125	Airplane motor at 25 feet
140	<b>OSHA maximum impulse or impact sound allowed</b>

Time-Weighted-Average (TWA) means an employee may be exposed to a level higher than 90 dbA, but for a shorter duration. For example, an employee may be exposed to:

90 dbA for 8 hours,  
95 dbA for 4 hours,  
100 dbA for 2 hours,  
105 dbA for 1 hour, or  
115 dbA for 15 minutes.

**No continuous exposures greater than 115 dbA are permitted.** Iowa Code 85B requires that employers inform employees of exposures in excess of the Time-Weighted-Average.

Hearing protection must be offered to employees exposed to TWAs from 85 to 90 dbA. If the employee has experienced a threshold shift, protection must be mandatory at a TWA of 85 dbA or greater. At 90 dbA TWA, hearing protection will be mandatory for all employees exposed.

Hearing conservation is a unique safety concern for several reasons. Unlike many other occupational exposures, noise is encountered in many off-the-job activities, and therefore the causal relationship to work becomes blurred. In addition to protecting employees at work, an effort should be made to encourage hearing protection off the job.